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EMPLOYMENT IN ALBERTA

A Companion Guide
to Job Trends

Alberta

ADVANCED EDUCATION
AND MANPOWER
Career Resources Branch

DDN

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EMPLOYMENT IN ALBERTA

A COMPANION GUIDE TO "JOB TRENDS"

Choosing a career is a difficult task. Matching interests and abilities with work that is done on the job, and meeting both the academic and personal qualifications demanded by that job, are major considerations of the job-selection process. Occupational outlook is another factor entering into the selection process after all other factors have been weighed. With greater numbers of qualified people and keener competition for employment in some fields, considering the prospects of employment within occupations is becoming increasingly important. Whatever the situation, the more information you have about the world of work, the easier the decision will be.

EMPLOYMENT IN ALBERTA

Historic Perspective of the

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¹As the terms "occupation" and "industry" are used throughout the guide, it is important that they be defined as used.

Occupation - A collection of jobs which are sufficiently similar in their main tasks to allow them to be grouped together under a common title for identification and classification. An occupation denotes the type of job an individual performs within an organization.

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Historic Perspective of the '70's

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These factors played a significant part in the growth and development of Alberta's economy over the past ten years. The greatly increased demand for domestic oil in the early 70's, followed by the decision to proceed with the Syncrude project led to growth¹ at an unprecedented rate in the mining (oil and gas) and construction industries in Alberta.

During the 1975-79 period, mining experienced very high annual employment growth (an average rate of 19.5%). Employment in construction over the same period increased at an average annual rate of 13.4%. Greatly increased activity in these two industries had high growth "spin-off" effects for such population-based industries as transportation and communication, finance, insurance, and real estate. This growth and development marked the beginning of the shift toward an expansion in the secondary and tertiary sectors of the economy - the trend for the 80's.

As the demand for skilled manpower increased, the economic boom attracted large numbers of interprovincial and international migrants to the province. A significant portion of the employment growth experienced in Alberta throughout the 70's resulted from migration to the province.

The rate and nature of employment growth in the 70's led to above average growth in such skilled occupations as construction, transportation, professional, and managerial fields. This, combined with a high level of population growth, laid the foundation for the rate of growth and development in the population-based industries expected for the 80's.

¹When considering economic growth and development, it is important to remember that it is the demand for the goods or services produced by workers in an occupation that determines the rate of growth of that occupation. As demand fluctuates so will the numbers employed in the occupation.

Alberta's employment development through the 70's can be represented by the following:

early 1970's

EXISTING RESOURCES + DEMAND
(for oil)



GROWTH IN INDUSTRY
(Resource Extraction
and Construction)

AND

GROWTH IN POPULATION
(through migration
and natural increase)
AND EMPLOYMENT
(through migration,
natural increased
labour force par-
ticipation of women)



1980's

GROWTH IN POPULATION-BASED INDUSTRIES AND OCCUPATIONS
(community, business and personal services, finances,
insurance, real estate, and manufacturing)

Background to the 80's Forecast

Economic forecasters base their manpower demand projections on information relating to the demand for goods and services, advances in technology, changes in business and other factors including past trends and assumptions for the future. Past trends indicate the direction that economic development and population growth have taken and will probably continue to take if social, economic, and political conditions remain stable. Assumptions concerning social values, political conditions and government systems are basic to forecasting. For example, economic forecasters are assuming that the Cold Lake project, the Alsands project, and the Alaska Highway Gas Pipeline will proceed as planned to provide the impetus to economic development in the province in the early 80's. They also assume that consumer habits, government policies, population growth, oil pricing, and interest rates will follow a relatively stable pattern of progression. If these assumptions are accurate, the forecasts can be expected to be relatively accurate. However, estimates for future employment as indicators of job prospects are subject to error, vary considerably among local job markets and can be quickly rendered invalid by unforeseen political, social or economic developments.

It is important to realize the limitations of forecast information. Alberta has and will probably continue to experience rapid growth and change for some time. Under such circumstances, reliable long range forecasting is extremely difficult. Short-term forecasts, for a 5-year period, can be made with greater confidence since the data can incorporate events and projects which have already been planned and committed.

If past trends continue and assumptions for the future hold firm, an average employment growth rate of 4.2% per annum can be expected for Alberta in the 1980-88 period - a healthy outlook and one which exceeds the overall Canadian average. Employment in Alberta is expected to increase from 976,000 jobs in 1979 to 1,421,000 jobs in 1988 - a 45% increase. Of the approximately 700,000 employment opportunities expected to become available within the 1980-88 period, 55% or 400,000 will be new jobs

created by expansion of the economy, while the remaining 45% or 300,000 will result from attrition - openings occurring as people leave the labour force for various reasons (death, retirement, illness, to raise a family, etc.). Forecasts indicate that record levels of migration will be required to meet the anticipated growth in employment. Due to the fact that the baby boom population has already been absorbed into the labour force, and that the proportion of labour force growth accounted for by natural increase will be actually declining, migrants will play an increasingly significant role in the future growth of the provincial labour force.

While the major economic projects planned for Alberta in the 80's will create considerable activity in the oil and gas and construction industries, employment growth in these industries will be somewhat below the overall provincial annual average. This is partially due to the sizable labour force established in those industries during the 70's. The fastest growing industries in the 80's are expected to be in the service sector, finance, real estate, insurance and manufacturing. The rising demand for goods, and for personal, business and community services will evolve from a vastly increased population. This will hasten the industrial shift from the primary, resource-based growth of the 70's to the secondary and tertiary, population-based growth of the 80's. Accompanying this growth will be an increased demand for highly qualified and skilled manpower.

OUTLOOK FOR THE 80's - BY OCCUPATION

I. Managerial, Professional and Administrative Occupations

Occupations in this broad category, which account for slightly over 22% of current employment in the province, are expected to be in high demand throughout the 80's as a result of continued economic expansion. Forecasters anticipate annual growth within this category to be surpassed only by the service occupations. Growth in the managerial, professional and administrative occupations will create a demand for highly qualified and skilled manpower. It

appears that a post-secondary education from a university, college or technical institute will be a required qualification for most of the employment opportunities in this category. An increased emphasis on research and development, along with the encouragement of high technology industries by all levels of government will contribute to a greater demand for highly qualified and specialized manpower.

Since this category is so broad and includes such a wide variety of occupations, those subsections experiencing significant growth will be discussed separately.

A. Managerial and Administrative Occupations

As the economy is expected to remain strong throughout the 80's and the population is expected to grow, the resulting expansion in business development will create a demand for managerial and administrative personnel. Expansion and growth in financial management occupations in banks, credit agencies, and investment companies will give rise to employment opportunities for accountants, auditors, inspectors, and regulatory officers in private industry. Good opportunities will likely exist for those with Master of Business Administration and Commerce degrees.

B. Occupations in the Sciences and Mathematics

Research indicates that in the early 80's efforts to maximize the production of crude oil, natural gas and other energy sources through various means will result in a very high demand for engineers, geologists, geophysicists and other general science graduates, as well as technical graduates in petroleum, earth sciences, gas engineering and mechanical drafting.

In discussing the petroleum industry and related occupations Oilweek magazine stated:

"Generally speaking, the job picture is very bright with opportunities for virtually every level of education, with technical skills becoming increasingly important. . .As petroleum consumption continues to escalate, demand for qualified people to meet the petroleum challenge continues to increase".¹

In a recent issue of Bulletin, the University of Alberta Newsletter, chairmen from various science departments commented on the demand for science graduates in the employment market:

"Job opportunities are improving strongly in the physical sciences, computing science, geology, physics and chemistry. . . the demand for scientists has improved because of recent increases in industrial activity and federal government funding. Dr. MacDonald says that the demand for physics students has 'increased enormously in all areas'. . .". "Dr. Richard Lambert. . .says the job demand for geologists 'is easily the best it has ever been. There are far more job openings than students', he says. 'There is a serious shortage of good post-graduates in petroleum and mining geology and undergraduates and post-graduates in geophysics.' Perhaps the strongest job opportunities exist in computing science. Department Chairman, Dr. John Tartar reports that the field of computing science has 'zero unemployment' and four to ten times more job opportunities than applicants".² Other occupations within this category which are expected to experience high demand are architects, draftspersons and surveyors.

¹Oilweek, Nov. 29, 1979, p. 12-13.

²Bulletin, U of A Admissions Policy, Evaluation and Liaison Div. Off. of Registrar, May, 1980, p. 2.

C. Medical and Health Occupations

The medical and health occupations which are expected to experience high demand are nurses, physiotherapists, occupational therapists, medical laboratory technologists and dental hygienists. As with other service-oriented occupations, expansion in the population will result in greater demand for medical services. Increased emphasis on both health care and high technology research, along with additional funding and encouragement from government, will likely lead to heightened activity in medical occupations.

II. Clerical and Related Occupations

About 16% of Alberta's labour force is involved in clerical and related occupations. Accelerating technological change will affect these occupations throughout the 80's by making some jobs obsolete while creating other new ones. Because of the increased use of mini-computers and electronic data processing equipment there will have to be a new focus in business education and training. Growth in the clerical occupations is expected to average 4.5% per year, being exceeded in growth only by the service occupations and the managerial, professional, and administrative occupations. As clerical occupations are found in virtually all industries, they will benefit from the growth of the economy as a whole.

III. Sales Occupations

Sales occupations presently account for approximately 11% of provincial employment. The expansion of retail trade, necessitated by the increase in population and business development will bring about an expansion of employment for sales workers. A greater population will also increase demand for personnel in finance, insurance and real estate sales. The annual growth rate for sales occupations is expected to average 4.4% throughout the 80's.

IV. Service Occupations

About 12% of Alberta's labour force is involved in some way in service occupations. This grouping generally refers to employment relating to personal and protective services, the provision of food and beverage services, lodging, and other accommodation services. This is expected to be the fastest growing group of occupations during the 1980-88 period, with an average annual growth rate of almost 5%. A larger, more affluent population choosing to dine out more frequently will place heavy demands on food and beverage preparation occupations. High demand is expected for chefs, cooks, waiters and waitresses, hostesses, and stewards.

Other areas of this occupational grouping expected to show strong growth are hospitality and tourism. As many Canadian and foreign tourists look to Alberta's resort areas as an alternative to the more costly European and American ones, hospitality and tourism occupations will be stimulated. The high concentration of petroleum-related head offices located within the province has created a boom in the hotel industry providing accommodation and convention facilities to travellers and businessmen. These and other factors all point to a healthy outlook for employment in service occupations throughout the 80's.

V. Primary Occupations

Currently about 11% of people employed in Alberta work in primary occupations. This occupational grouping encompasses all resource-based industries including farming, forestry, mining (including oil and gas), fishing, trapping, hunting and related occupations. Since there is a great deal of variation in occupational outlook between these fields, it is best to consider them in two distinct categories - agriculture and other primary occupations.

Forecasts indicate that in the other primary occupations grouping, mining, particularly oil and gas, will continue in the strong growth pattern established in the 70's. The goal of self-sufficiency in energy will provide the major thrust in mining occupations—giving rise to an anticipated high demand for drilling rig workers and other oil field personnel. Forestry will also show healthy growth in the 80's, with demand at most levels of the industry. Only marginal growth is expected in the numbers employed in agriculture. The increased use of labour-saving equipment and more efficient farming methods will enable productivity to increase significantly without any major growth in employment.

VI. Processing and Machining Occupations

This grouping includes occupations concerned with refining or otherwise treating various materials for direct use or to produce a semi-finished or finished product. About 10% of the provincial labour force is presently employed in these occupations. The provincial goal to expand secondary industries in the province will lead to increased employment opportunities in petrochemical and petroleum refining, hydroelectric generation, wood-product processing, food and beverage processing and metal-based manufacturing. Increased population, and business and industrial development will create a greater local demand and market for the processed goods and will likely accelerate the goal of diversification. Forecasts indicate high demand for machinists, sheet-metal workers, machine-tool set-up operators, welders, flame-cutters and various types of mechanics and process operators.

VII. Construction Occupations

At present, approximately 10% of provincial employment is absorbed by construction occupations. Continued high demand is anticipated for most construction trades, particularly in the early 80's, during the construction phase of the major industrial development projects

- the Cold Lake and Alsands projects, and the Alaska Highway Gas Pipeline. As previously mentioned, because of the employment base of construction trades workers established in the 70's, the growth rate will not be as high as in some other occupational categories, despite considerable activity in the industry. Growth is, however, expected to average 3.8% annually through the 1980-88 period, with anticipated high demand for such skilled tradesmen as construction electricians, pipefitters, millwrights, insulators and plumbers.

VIII. Transportation Occupations

This category employing about 5% of the work force includes all aspects of the various modes of transporting both passengers and freight. Employment in these occupations is expected to grow at an annual rate of approximately 4.3% - slightly exceeding the expected overall employment growth rate. The growth of several major industrial developments in outlying areas of the province will increase transportation activity from supply and service centres to development sites. Population growth will create additional demands for increased services, better facilities, and improved methods for distribution of goods. The growth and development expected in the manufacturing and processing occupations will also have consequences for increased activity in the transportation occupations.

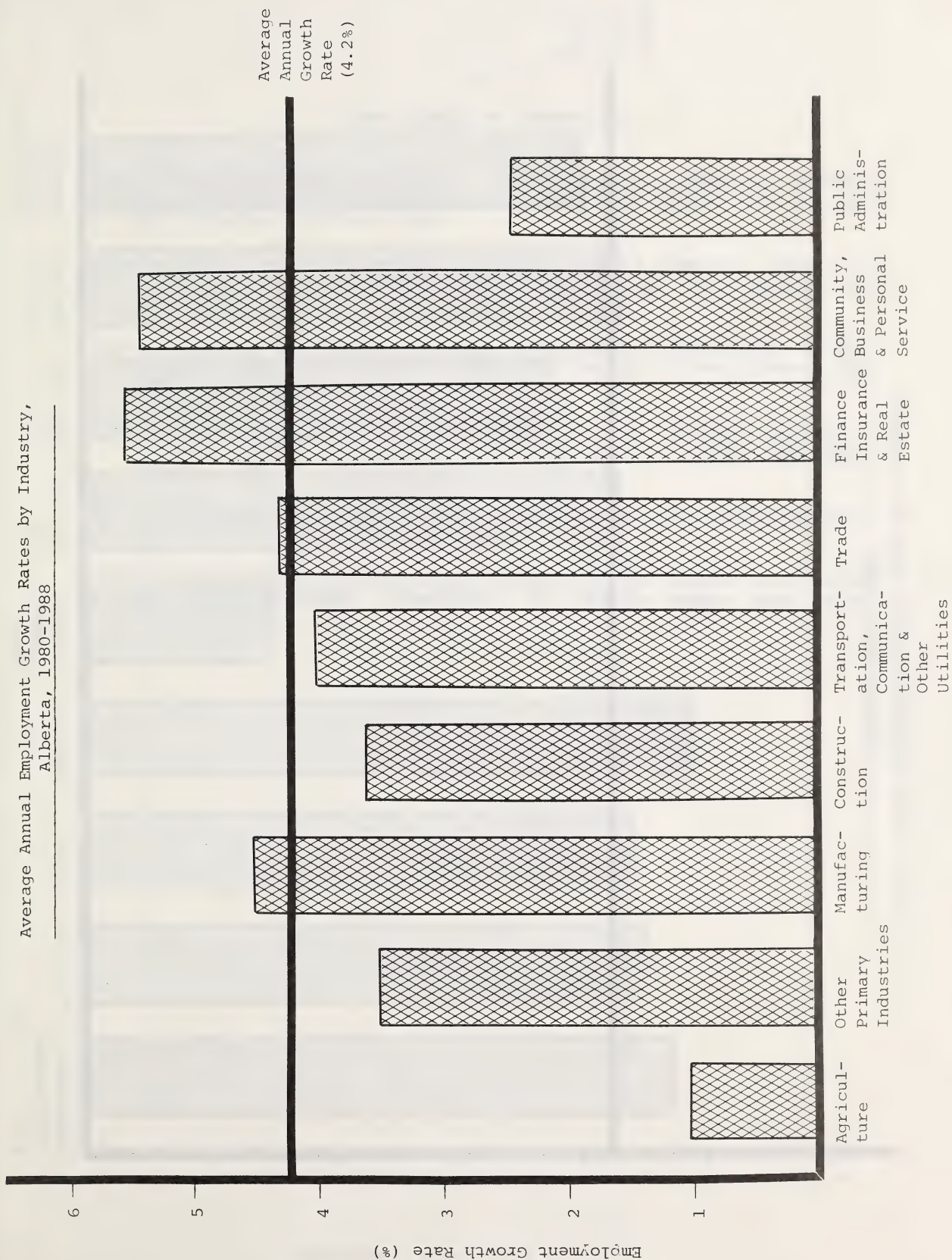
IX. Materials Handling and Other Crafts

About 3% of provincial employment falls within this category which includes all those occupations involved with the moving, lifting, loading and packaging of materials and products. In light of the anticipated growth in secondary industries within the province, occupations in the materials-handling category are expected to grow at a rate of approximately 4% per year. High demand occupations within this category include stationary engine and auxiliary equipment operating and maintaining occupations.

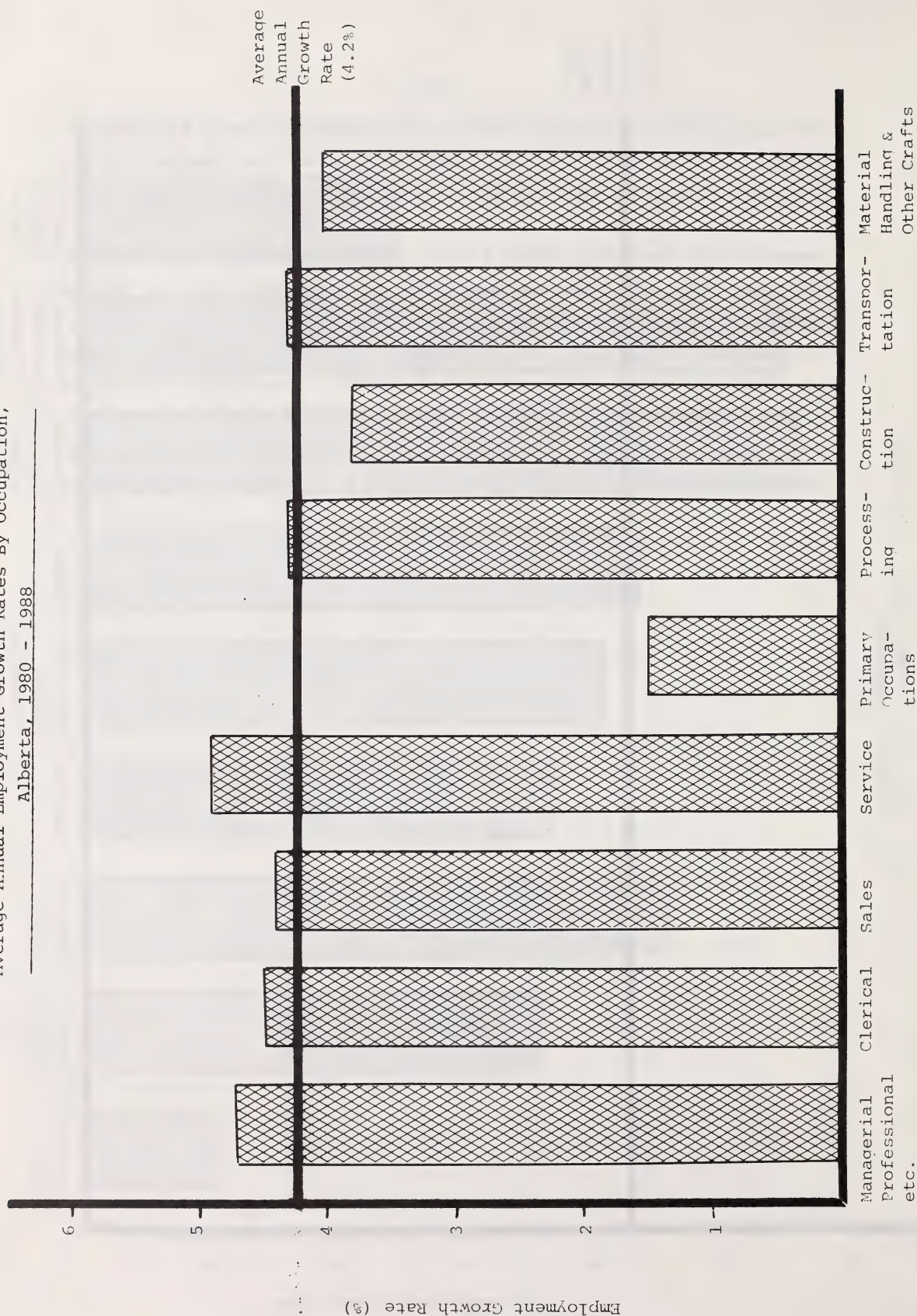
The attached graphs represent the expected employment situation for the various occupational categories throughout the 1980-88 period. A graph indicating the average annual growth rate by industry is also attached.

It is hoped that this guide will give a basic background to employment growth in the province and will provide not only more specific information regarding employment opportunities, but a better general understanding of factors contributing to the growth and development of various occupations. While it is important to appreciate the limitations of forecast material both statistically and geographically, the background information provided will aid in that interpretation and understanding and lead to a broader comprehension of employment trends.

Average Annual Employment Growth Rates by Industry,
Alberta, 1980-1988



Average Annual Employment Growth Rates By Occupation,
Alberta, 1980 - 1988



OTHER SOURCES OF INFORMATION

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